



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527.755	03/14/2005	Sang-Jin Kim	3449-0454PUS1	8939
2292	7590	07/07/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			ROJAS, BERNARD	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/527,755	Applicant(s) KIM, SANG-JIN	
	Examiner Bernard Rojas	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03142005 07272005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 1 is objected to because of the following informalities: there appears to be a typographical error in line 3 of the claim, "...provided ed on...". Appropriate correction is required.

Claim 16 is objected to because of the following informalities: there appears to be a typographical error in line 2 of the claim, "...formed to passing..." Appropriate correction is required.

Claim 22 is objected to because of the following informalities: there appears to be a typographical error in line 1 of the claim, claim 22 cannot depend from itself. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the recess" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10-12 and 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroyoshi et al. [US 5,682,132].

Claim 1, Hiroyoshi et al. discloses a vibration device [figure 1] comprising: upper [410] and lower [420] cases combined with each other; a magnetic force generating unit

Art Unit: 2832

[220] provided on at least one surface of the upper and lower cases [figure 1]; at least one magnet [110] formed to be opposite to the magnetic force generating unit; a weight [120] which forms one body together with the magnet; elastic units [310] combined to upper and lower surfaces of the weight and extended above and below the weight to elastically support the weight; and a fixing member [210] for fixing ends of the elastic units.

Claim 2, Hiroyoshi et al. discloses the vibration device according to claim 1, wherein the elastic unit includes a strip of a closed-curve shape and a plurality of support legs extended from the strip, and the support legs form a downwardly turning curve in an axial direction of the strip [figures 3, 8 and 10-12].

Claim 3, Hiroyoshi et al. discloses the vibration device according to claim 2, wherein the strip has a polygonal or circular shape [figures 3, 8 and 10-12].

Claim 4, Hiroyoshi et al. discloses the vibration device according to claim 2, wherein the elastic unit includes at least two support legs [figures 3, 8 and 10-12].

Claim 5, Hiroyoshi et al. discloses the vibration device according to claim 1, wherein the elastic unit is a coil spring of a circular or polygonal conical shape [figure 9].

Claim 6, Hiroyoshi et al. discloses the vibration device according to claim 1, wherein the magnet is formed on only one surface [the outer periphery] of the weight opposite to the magnetic force generating unit.

Claim 7, Hiroyoshi et al. discloses the vibration device according to claim 1 wherein the magnetic force generating unit is a coil [220].

Claim 8, Hiroyoshi et al. discloses the vibration device according to claim 1, wherein the weight is made of tungsten [col. 7 lines 30-38].

Claim 10, Hiroyoshi et al. discloses the vibration device according to claim 1, wherein elastic unit insert grooves [groove between 120 and 130] are formed on the upper and lower surfaces of the weight so that the elastic units are inserted and fixed therein respectively.

Claim 11, Hiroyoshi et al. discloses the vibration device according claim 1, wherein the fixing member includes protrusions at upper and lower ends to be contacted with the upper and lower cases and a recess depressed at a center thereof, and fixing grooves are formed in ends of the protrusions respectively so as to fix ends of the elastic units [col. 9 lines 15-26].

Claim 12, as best understood, Hiroyoshi et al. discloses the vibration device according to claim 10, wherein a recess is formed to ensure a space sufficient for a weight extension to be capable of moving vertically [figure 1].

Claim 15, Hiroyoshi et al. discloses the vibration device according to claim 1, wherein the magnets are formed on both surfaces of the weight so as to be opposite to the magnetic force generating unit [figure 1].

Claim 16, Hiroyoshi et al. discloses the vibration device according to claim 1, wherein there is one magnet formed to pass through the weight vertically [figure 1].

Claim 17, Hiroyoshi et al. discloses a vibration device comprising a strip [310] of a closed-curve shape and a plurality of support legs extended from the strip, wherein

the support legs form a downwardly turning curve in an axial direction of the strip [figures 3, 8 and 10-12].

Claim 18, Hiroyoshi et al. discloses the vibration device according to claim 17, wherein the strip has a polygonal or circular shape [figures 3, 8 and 10-12].

Claim 19, Hiroyoshi et al. discloses the vibration device according to claim wherein the number of the support legs is 2 or 4 [figures 3, 8 and 10-12].

Claim 20, Hiroyoshi et al. discloses the vibration device according to claim 17, wherein ends of the support legs are supported by a fixing member [210] of the vibration device.

Claim 21, Hiroyoshi et al. discloses a vibration device comprising an elastic unit [310], which is a coil spring of a polygonal circular conical shape [figure 9] whose upper section is smaller than a lower section.

Claim 22, as best understood, Hiroyoshi et al. discloses the vibration device according to claim 17, wherein the vibration device is included in a communication terminal or a vibrating sound instrument [col. 1 lines 5-10].

Claims 23, 24, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakai [US 6,850,138].

Claim 23, Sakai discloses a vibration device [figure 1B] comprising: a case [12]; a terminal plate attached to one side of the case and connected to an external power source; a vibrating plate [9] formed in an upper portion of the case; voice coil [10] combined below the vibrating plate; magnetic force generator [1, 2] formed below the voice coil; a cubic elastic unit [5] for elastically supporting the magnetic force generator;

and upper and lower covers formed above and below the case to protect inner components [figure 1B].

Claim 24, Sakai discloses the vibration device according to claim 23, wherein the magnetic force generator comprises: a magnet [2]; a yoke [1] formed to surround the magnet; and a plate [3] seated upon the yoke.

Claim 27, Sakai discloses the vibration device according claim 23, wherein the elastic unit is a coil spring having circular or polygonal conical shape [figure 2A, col. 3 lines 8-10].

Claim 28, Sakai discloses the vibration device according to claim 23, wherein the vibration device has a sound function [col. 1 lines 10-15].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroyoshi et al. [US 5,682,132].

Claim 9, Hiroyoshi et al. discloses the claimed invention except for a magnet mounting groove of a predetermined depth is formed in one of the upper and lower surfaces of the weight. It would have been obvious to one of ordinary skill in the art at the time the invention was made to change the magnet mounting method of Hiroyoshi et

Art Unit: 2832

al. to include a groove in order to more securely attach the magnet to the out periphery of the weight.

Claim 13, Hiroyoshi et al. discloses the claimed invention except for the claimed mechanical elastic unit mounting means. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use another elastic unit mounting means as taught by Hiroyoshi et al. [col. 9 lines 20-26] to change the mounting strength or simplify production.

Claim 14, Hiroyoshi et al. discloses the claimed invention except for magnetic force generating unit being formed on one surface of each of the upper and lower cases. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the location of the magnetic force generating unit since applicant has not disclosed that the claimed location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the configuration as shown by Hiroyoshi et al.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai [US 6,850,138], as applied to claim 23 above, in view of Hiroyoshi et al. [US 5,682,132].

Sakai discloses the claimed invention except for the design of the claimed elastic unit.

Hiroyoshi et al. teaches a vibration device [figure 1], with various configurations for the elastic unit including a circular or polygonal strip of a ring shape and plurality of

Art Unit: 2832

support legs [2 or 4] extended from the strip, and the support legs form a downwardly turning curve in an axial direction of the strip [figures 3, 8 and 10-12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an alternate spring configuration in the vibration device of Sakai as taught by Hiroyoshi et al. in order to adjust the vibration characteristics to the moving part coupled to the elastic element.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brand Rye
Br


ELVIN ENAD
SUPERVISORY PATENT EXAMINER
6/26/05